FIG. 1

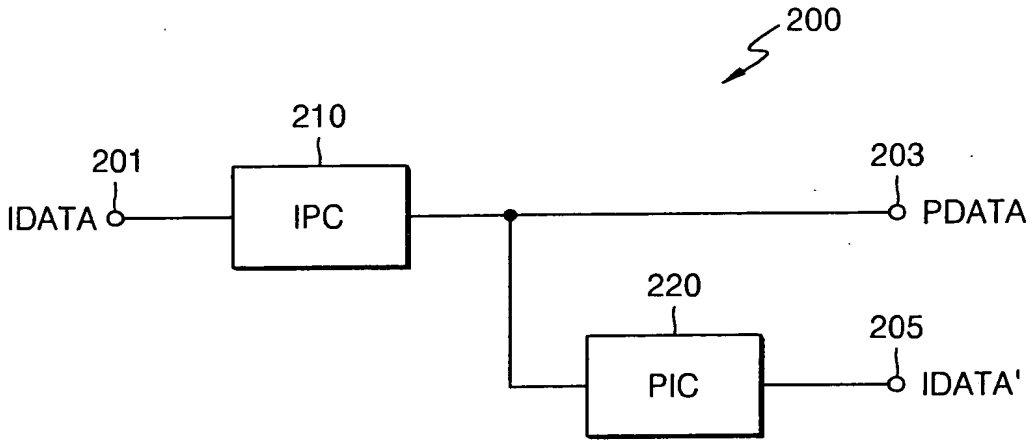

FIG. 2

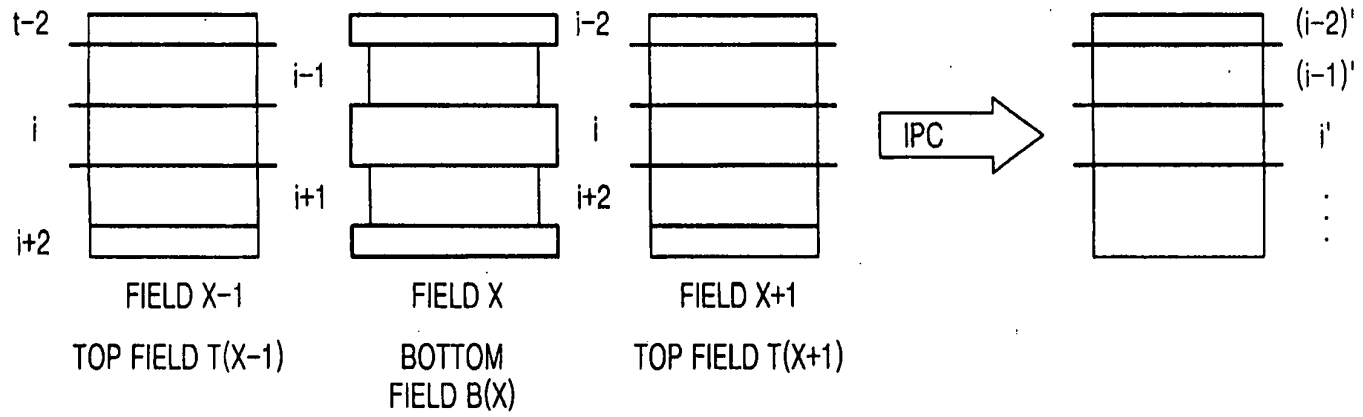
t-2
i
i+2
i-1
i+1
i-2
i
i+2
IPC
(i-2)'
(i-1)'
i'
FIELD X-1
TOP FIELD T(X-1)
FIELD X
BOTTOM
FIELD B(X)
FIELD X+1
TOP FIELD T(X+1)

FIG. 3

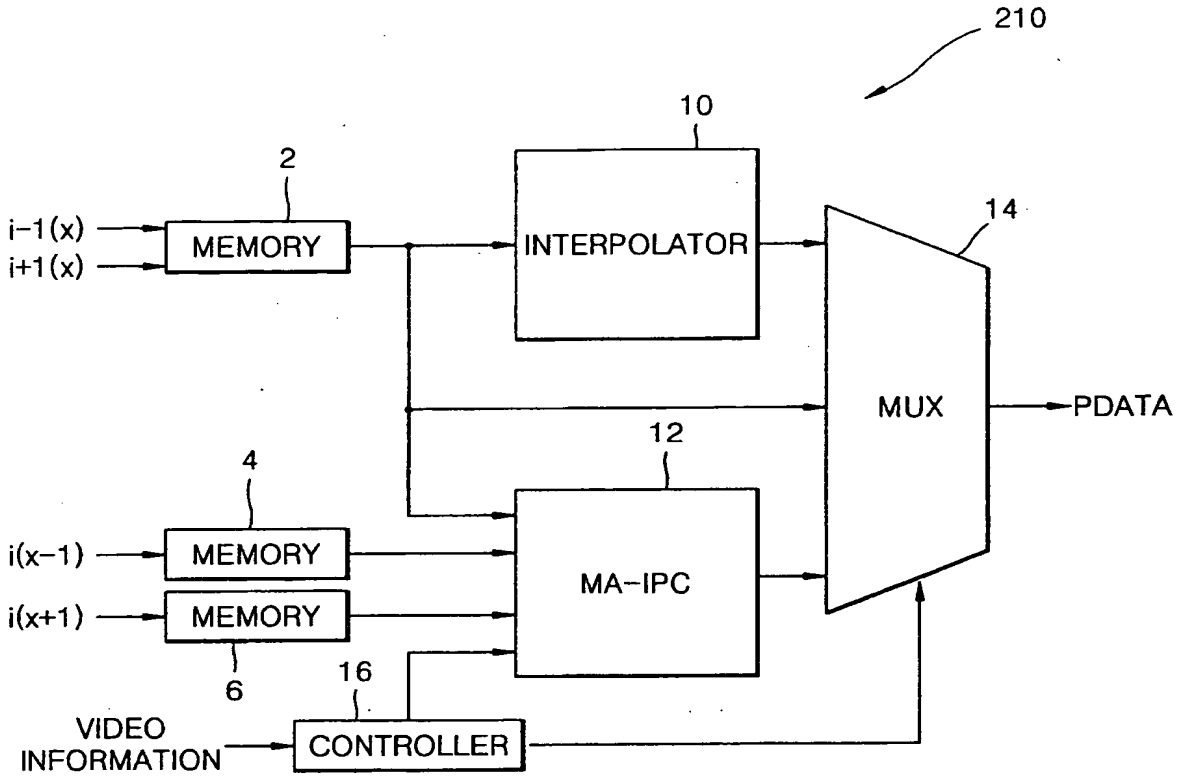
210
10
2
i-1(x)
i+1(x)
MEMORY
INTERPOLATOR
14
MUX
PDATA
12
4
i(x-1)
MEMORY
MA-IPC
i(x+1)
MEMORY
6
16
VIDEO INFORMATION
CONTROLLER

FIG. 4A

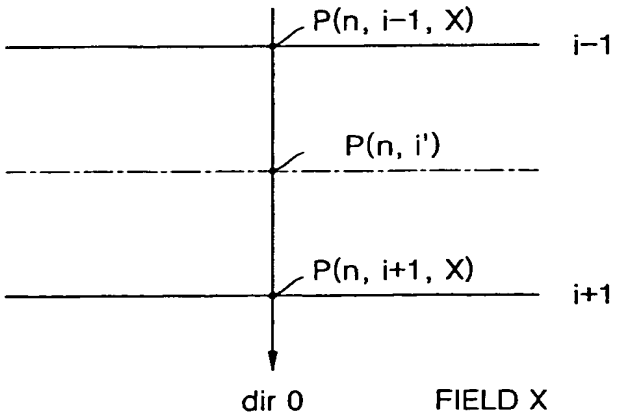
P(n, i-1, X)
i-1
P(n, i')
P(n, i+1, X)
i+1
dir 0
FIELD X

FIG. 4B

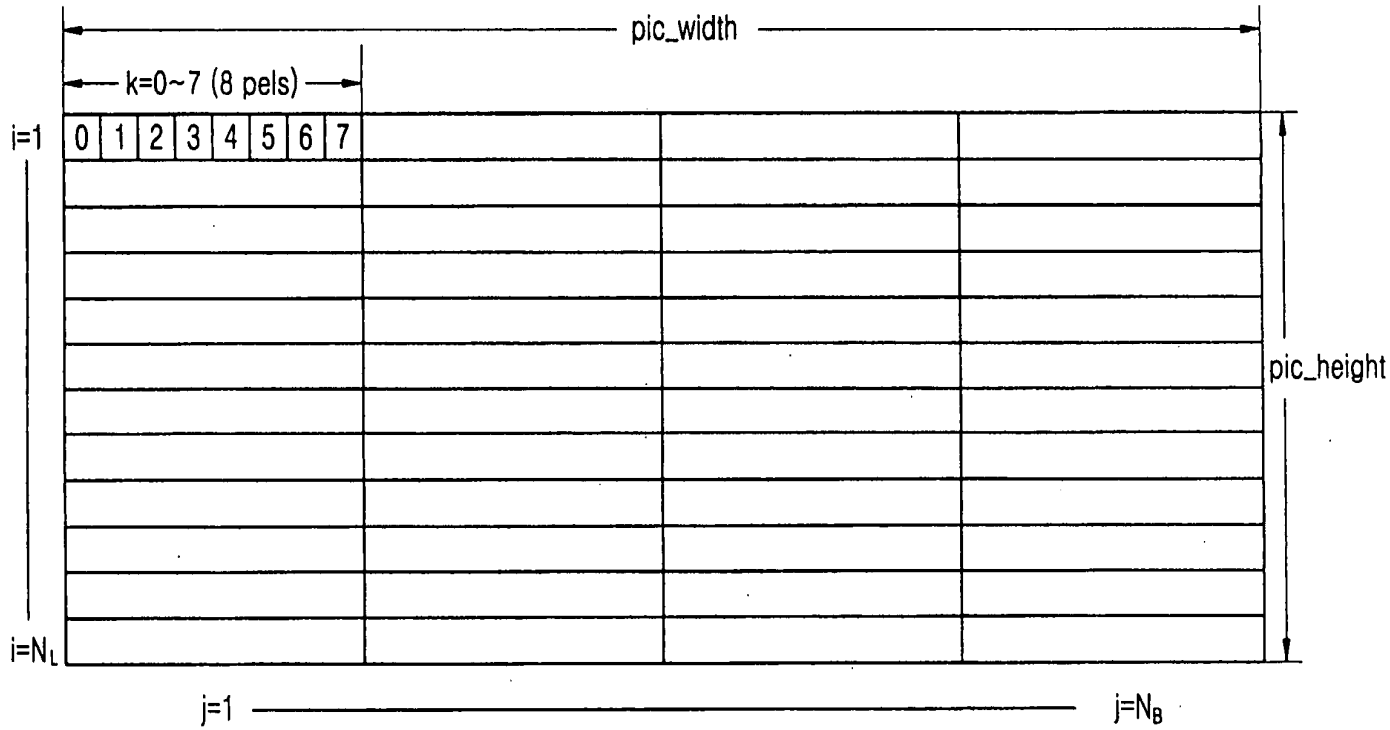

FIG. 4C

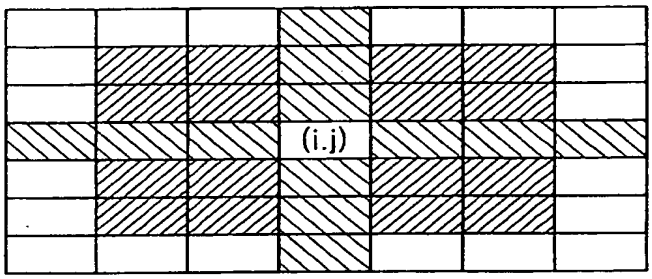

FIG. 4D

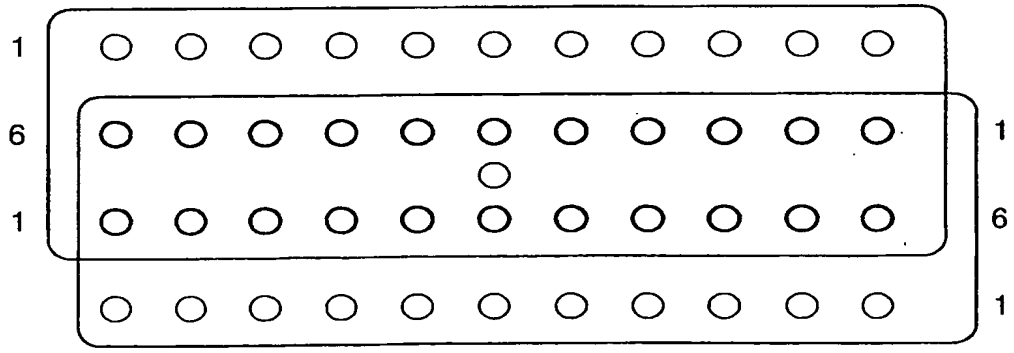

FIG. 4E

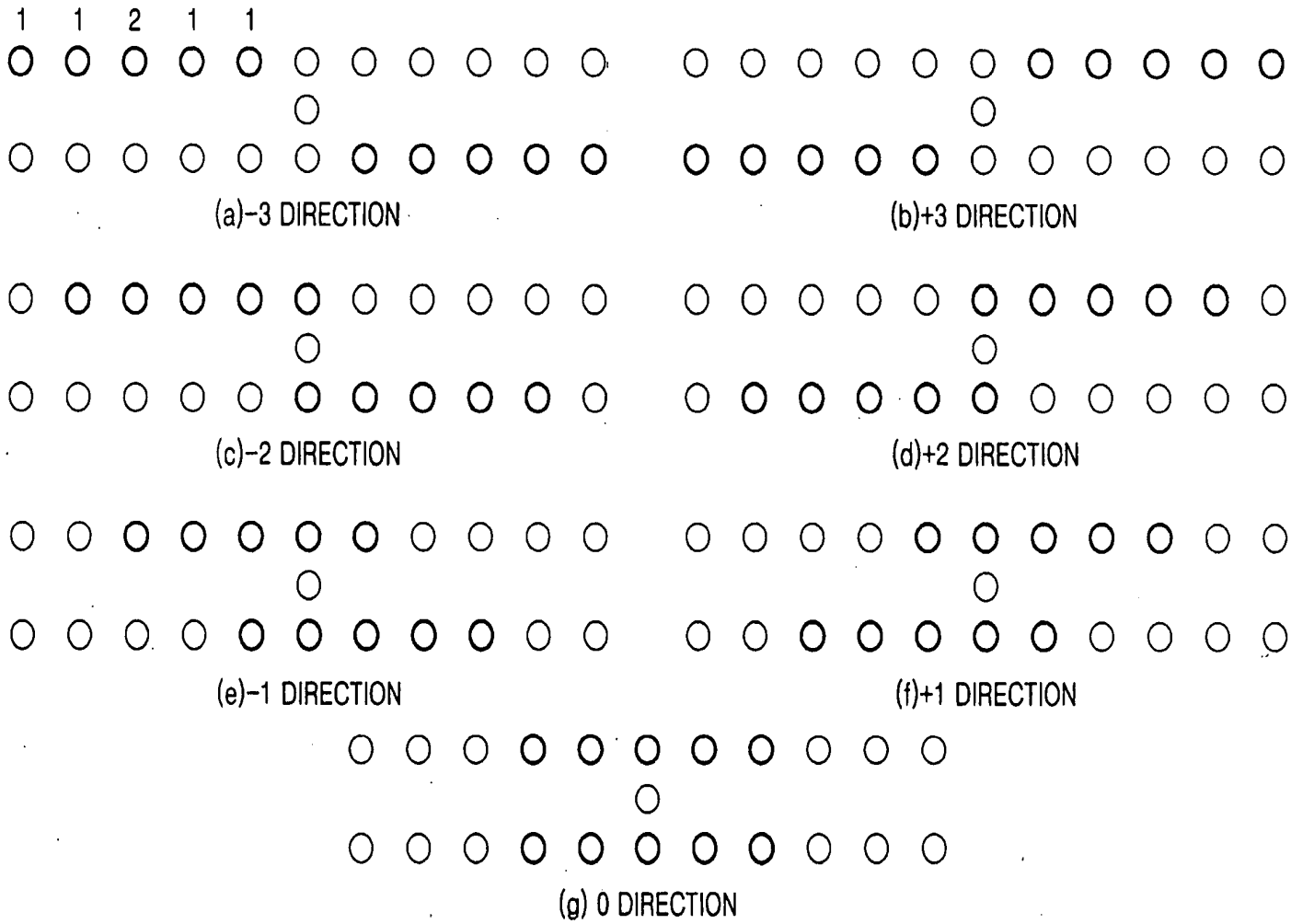
1 1 2 1 1
(a)-3 DIRECTION
(b)+3 DIRECTION
(c)-2 DIRECTION
(d)+2 DIRECTION
(e)-1 DIRECTION
(f)+1 DIRECTION
(g) 0 DIRECTION

FIG. 4F

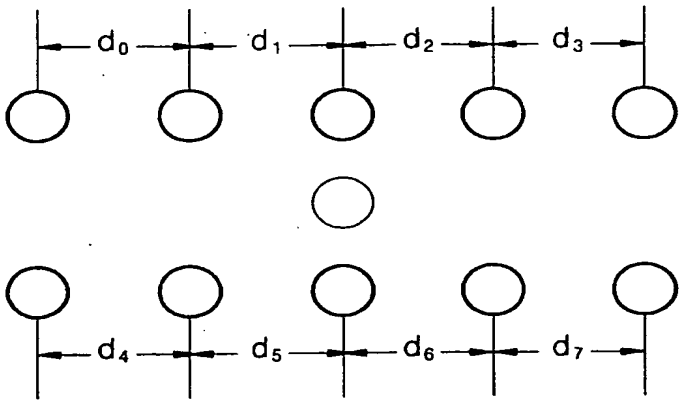
d0
d1
d2
d3
d4
d5
d6
d7

FIG. 5

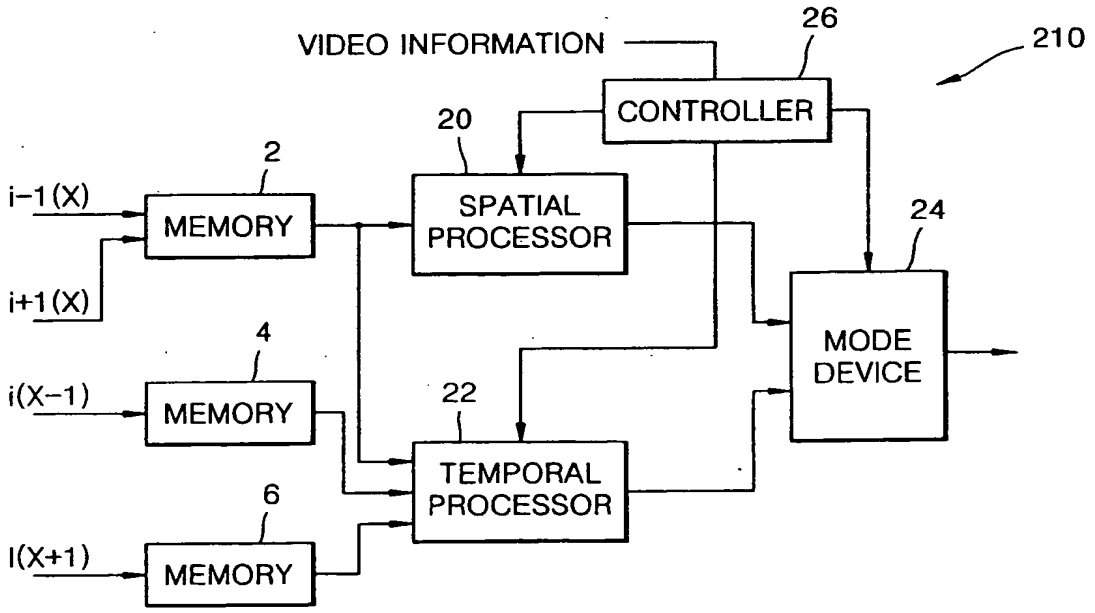
VIDEO INFORMATION
26
210
CONTROLLER
20
2
i-1(X)
MEMORY
SPATIAL PROCESSOR
24
i+1(X)
4
i(X-1)
MEMORY
MODE DEVICE
22
TEMPORAL PROCESSOR
6
I(X+1)
MEMORY

FIG. 6

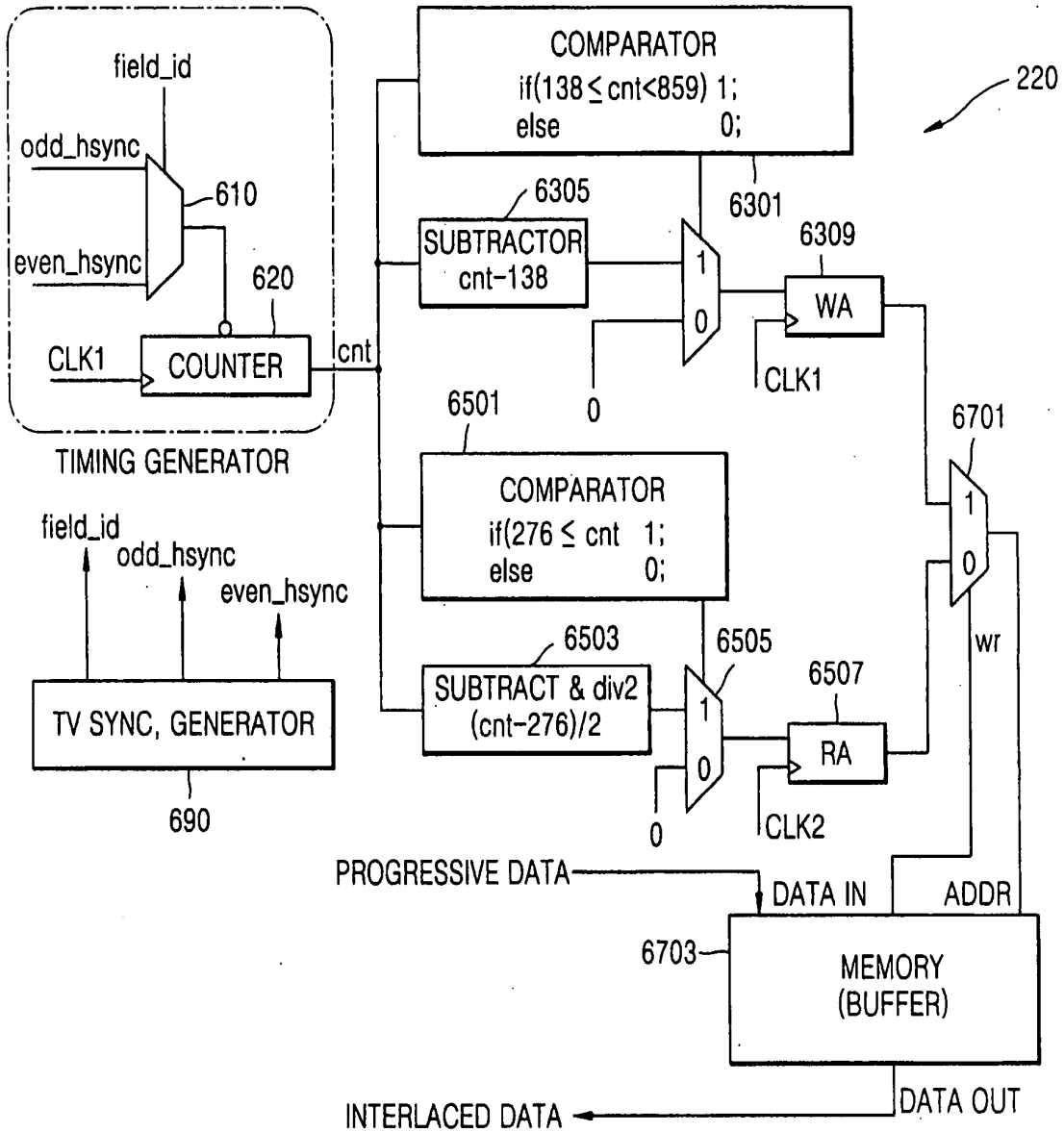
field_id
odd_hsync
610
even_hsync
620
CLK1
COUNTER
cnt
TIMING GENERATOR
COMPARATOR
if(138 ≤ cnt<859) 1;
else 0;
220
6301
6305
SUBTRACTOR
cnt-138
6309
WA
CLK1
0
6501
COMPARATOR
if(276 ≤ cnt 1;
else 0;
6701
wr
field_id
odd_hsync
even_hsync
TV SYNC, GENERATOR
690
6503
SUBTRACT & div2
(cnt-276)/2
6505
6507
RA
CLK2
0
PROGRESSIVE DATA
DATA IN
ADDR
6703
MEMORY
(BUFFER)
DATA OUT
INTERLACED DATA

FIG. 7A

FIG. 7B

FIG. 7C

FIG. 7D

FIG. 7E

FIG. 7F

FIG. 7G

FIG. 7H

FIG. 7I

FIG. 7J

FIG. 7K

FIG. 7L

FIG. 7M

FIG. 7N

FIG. 7O

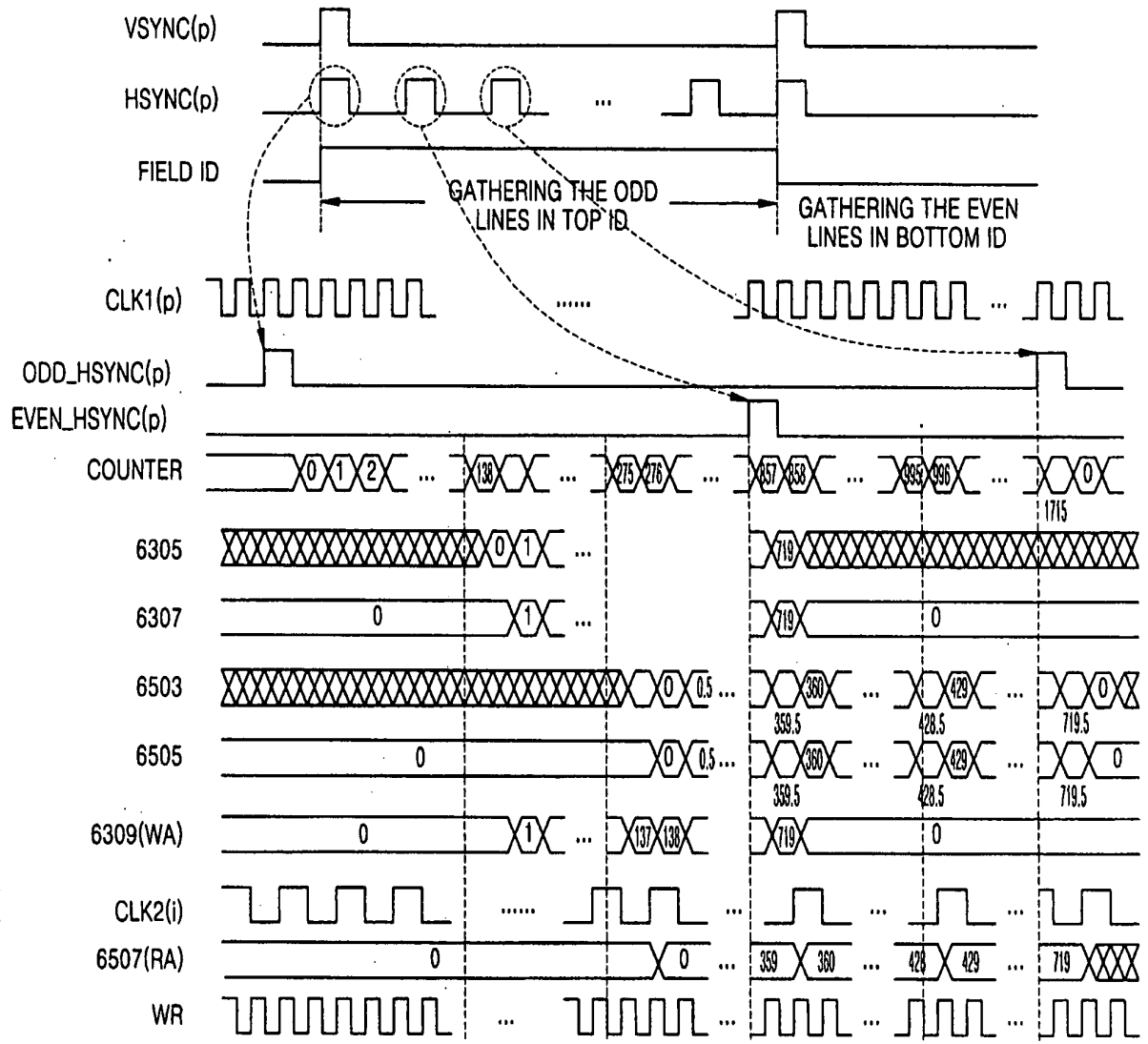

FIG. 8

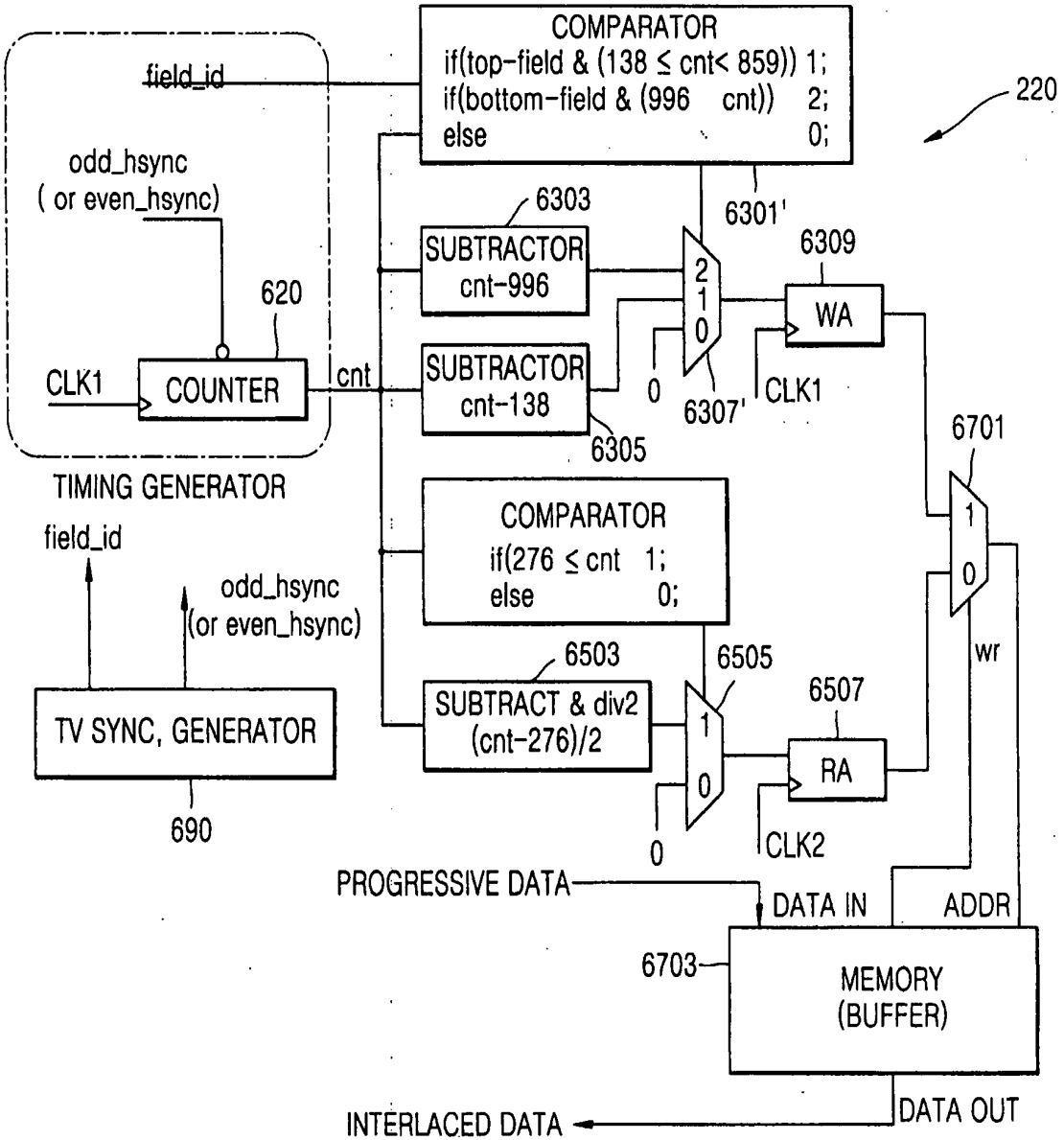
COMPARATOR
if(top-field & (138 ≤ cnt< 859)) 1;
if(bottom-field & (996 cnt)) 2;
else 0;
220
field_id
odd_hsync
(or even_hsync)
620
CLK1
COUNTER
cnt
TIMING GENERATOR
6303
SUBTRACTOR
cnt-996
SUBTRACTOR
cnt-138
6305
6301'
6309
WA
2
1
0
0
6307'
CLK1
6701
1
0
COMPARATOR
if(276 ≤ cnt 1;
else 0;
field_id
odd_hsync
(or even_hsync)
TV SYNC, GENERATOR
690
6503
SUBTRACT & div2
(cnt-276)/2
6505
6507
RA
wr
0
CLK2
PROGRESSIVE DATA
DATA IN
ADDR
6703
MEMORY
(BUFFER)
DATA OUT
INTERLACED DATA

FIG. 9A

FIG. 9B

FIG. 9C

FIG. 9D

FIG. 9E

FIG. 9F

FIG. 9G

FIG. 9H

FIG. 9I

FIG. 9J

FIG. 9K

FIG. 9L

FIG. 9M

FIG. 9N

FIG. 9O
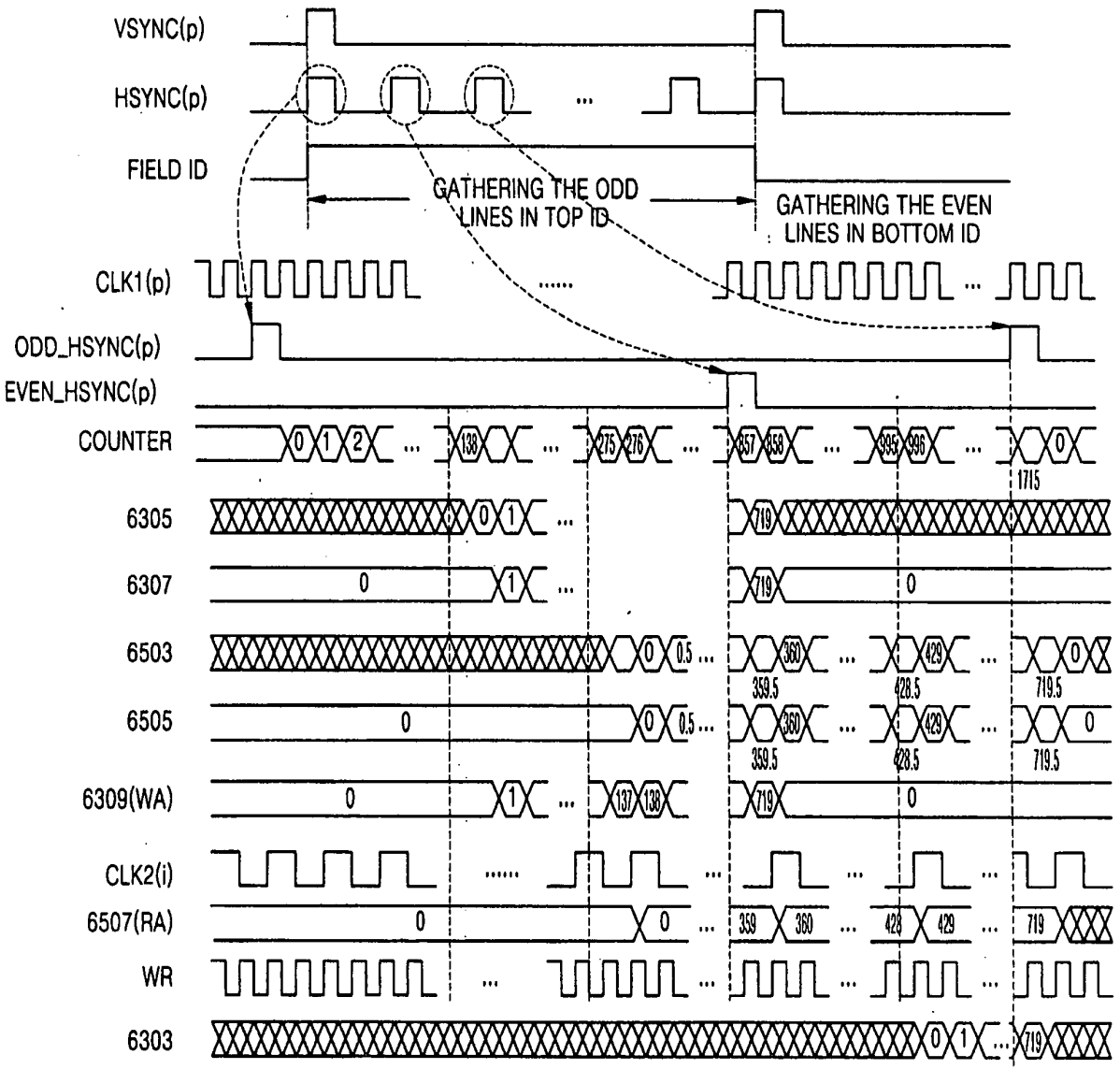
FIG. 9P